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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/757,721 | 01/10/2001 | Ursula Murschall | 00/001 MFE | 8369 |

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ProPat, L.L.C.
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EXAMINER

UHLIR, NIKOLAS J

ART UNIT

PAPER NUMBER

1773

16

DATE MAILED: 07/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/757,721

Applicant(s)

MURSCHALL ET AL.

Examiner

Nikolas J. Uhlir

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) none is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

1. This office action is in response to the arguments dated 6/30/03. The examiner has carefully considered the applicants arguments and finds them persuasive in overcoming the prior applied 112 2nd paragraph rejection of claims 1-17. These rejections are hereby withdrawn. However, applicants arguments with respect to the exclusion of DE19630599 as valid prior art under 35 U.S.C 103(c) are not persuasive for the reasons set forth below in the section entitled "response to arguments."

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murschall et al. (DE19630599) in view of Oishi et al. (5936048) and Rogers et al. (US5804626).

4. For the purpose of this examination, the examiner has relied upon an oral translation of the Murschall et al. reference. A complete written translation of the reference has been requested and will be provided to the applicant when it is received.

5. The limitation "where said at least one flame retardant, as dispersed component of a masterbatch, is fed directly by an extruder during the production of the film, wherein said masterbatch had been previously dried by gradual heating at subatonic pressure, with stirring" in claim 1, is a product-by-process limitation and is does not appear to be further limiting in so far as the structure of the product is concerned. "[E]ven though product-by-process claims are limited by and defined by the process, determination of

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patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP § 2113. In the instant case, the examiner takes the position that the combination of Murschall with Oishi results in a product that is the same as that instantly claimed although it was made via a different process, as the product of Murschall and Oishi results in an oriented polyester film containing the same components in the same amounts as that instantly claimed, as will be shown below.

6. Regarding the limitations of claim 1, wherein the applicant requires a transparent polyester film comprising at least one flame retardant which is soluble in polyester and a polyester, wherein said transparent polyester film does not embrittle when exposed to temperatures of 100⁰ C for 100 hours.

7. With respect to these limitations, Murschall et al. teaches a transparent polyethylene terephthalate (PET) (a known polyester) film that contains at least one antioxidant. Suitable primary antioxidants include sterically hindered phenols, and aromatic amines, and suitable secondary antioxidants include phosphites, phosphonites, thioethers, carbodiimide, and zinc-dibutyle-dithiocarbamate (page 3, table). In preferred embodiments, the transparent PET film contains a phosphite and/or a phosphonit and/or carbodiimide as the antioxidant. The amount of antioxidant contained in the film is between 0.01-6% by weight (page 3, lines 28-33).

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8. Murschall et al. does not teach a transparent polyester film that comprises a flame retardant, wherein the transparent polyester film does not embrittle when exposed to temperatures of 100⁰ C for 100 hours.

9. However, Oishi et al. teaches a method for preparing a modified polymer resin (title). These polymer resins include polyester such as polyethylene terephthalate (Column 17, lines 43-45). Oishi also teaches that in addition to a modified resin additive, an additive such as dimethyl methylphosphonate (DMMP) may be added to a resin to provide that resin with flame retardant properties (column 21 lines 4-11). Typically this flame retardant is added in an amount of 5-40% by weight (Column 23 lines 47-48).

10. Therefore it would have been obvious to one with ordinary skill in the art to add a 5-40% of a flame retardant such as DMMP as taught by Oishi et al. to the polyethylene terephthalate film taught by Murschall et al.

11. One would have been motivated to make this modification due to the increased flame resistance of the PET film one would expect to gain as a result.

12. It should be noted that DMMP is listed by the applicant in the instant specification as a suitable flame retardant that is soluble in polyesters. Thus, the examiner takes the position that the limitations regarding the flame retardant in claim 1 (i.e. solubility in polyester) are met when DMMP is added to the PET film of Murschall et al.

13. However, The combination of Murschall et al. with Oishi et al. still does not teach a transparent polyester film containing a soluble flame retardant, wherein the polyester film does not embrittle after exposure to temperatures of 100⁰ C for 100 hours.

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14. However, Rogers et al. teaches a polyester composition that comprises 95-99.90% by weight of a polyester, and 0.1-5.0% by weight of one or more polymeric carbodiimides (column 2, lines 34-50). Rogers et al. teaches that the carbodiimide acts as a hydrolysis stabilizer, which prevents the catalytic breakdown of polyesters at high temperature (column 7, lines 43-49). In a specific embodiment, Rogers et al. manufactures a PET film that contains 2% by weight of a carbodiimide known as Staboxal M (2, 2', 6,6'-tetraisopropyldiphenyl carbodiimide). This PET film, when exposed to temperatures of 121⁰ C for 9 days maintained at least 50% of its initial tensile strength. The examiner interprets this retention of tensile strength as an indicator that the PET film of Rogers et al. has not "embrittled" after 9 days at a temperature over 100⁰ C.

15. Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to utilize 0.1-5% by weight of Carbodiimide as the secondary antioxidant utilized in Murschall et al. as modified by Oishi et al.

16. One would have been motivated to specifically select carbodiimide from the list of suitable antioxidants listed by Murschall et al. due to the teaching in Rogers et al. that carbodiimide is also a hydrolysis stabilizer which prevents the degradation of polyester films (such as PET) at high temperature.

17. The examiner takes the position that the applicant's requirement in claim 1 of a polyester which does not embrittle after 100 hours at 100⁰ C is met by the combination of Murschall et al. with Oishi et al. and Rogers et al. This is due to the fact that Rogers

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et al. specifically teaches that when carbodiimide is utilized in a PET film, the film retains at least 50% of its mechanical strength after 9 days (216 hours) at 121⁰ C.

18. Regarding the limitations of claim 2, wherein the applicant requires the polyester film to comprise a hydrolysis stabilizer. This limitation is met as set forth above for claim 1.

19. The limitations of claim 3 are product-by-process limitations and is does not appear to be further limiting in so far as the structure of the product is concerned.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re*

Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP § 2113.

As stated above at section 5 of this office action, then examiner takes the position that the combination of Murschall with Oishi results in a product that is the same as that instantly claimed although it was made by a different process. This is in light of the fact that this combination of references results in a product that is made of the same materials in the same amounts as that instantly claimed, and exhibits high embrittlement resistance, as discussed above at section 17.

20. Regarding the limitations of claim 4, wherein the applicant requires the flame retardant to be one or more organic phosphorous compounds. This limitation is met as set forth above for claim 1.

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21. Regarding the limitations of claim 5, wherein the applicant requires the hydrolysis stabilizer to be selected from phenolic hydrolysis stabilizers, alkali metal/alkali earth metal carbonates/stearates. As noted above for claim 1, Murschall et al. teaches that the PET film can contain a sterically hindered phenol as a primary antioxidant. Further, Murschall et al. teaches that these antioxidants exhibit both antioxidant and hydrolysis stabilizing qualities that prevent the degradation of the polymer (page 3, lines 5-10 and table).

22. Therefore it would have been obvious to one with ordinary skill in the art to utilize a sterically hindered phenol as the primary antioxidant in Murschall et al.

23. Substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency. *In Re Fount* 213 USPQ 532 (CCPA 1982); *In Re Siebentritt* 152 USPQ 618 (CCPA 1967); *Grover Tank & Mfg. Co. Inc V. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

24. Regarding the limitations of claim 6, wherein the applicant requires the film to comprise 0.5-30.0% by weight of a flame retardant. This limitation is met as set forth above for claim 1.

25. Regarding the limitations of claim 7, wherein the applicant requires the film to comprise 0.1-1.0% by weight of a hydrolysis stabilizer. This limitation is met as set forth above for claim 1, as Rogers et al. clearly teaches that 0.1-5% of carbodiimide should be added to PET. As 0.1 specifically falls within the range specified by the applicant in claim 7, this limitation is met.

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26. Regarding the limitations of claim 8, wherein the applicant requires the polyester film to have two layers comprising a base and at least one outer layer. Murschall et al. teaches a specific embodiment where 3-layer polyester having an A-B-A layer structure is formed. The A layers are formed of the antioxidant containing polyester (page 7, example 1). Thus, the limitations of claim 8 are met.

27. Regarding the limitations of claim 9, wherein the applicant requires the flame retardant to be present in the outer layer. It would have been obvious to one of ordinary skill in the art to add the flame retardant taught by Oishi et al. to any of the layers in the three-layer structure Taught by Murschall et al.

28. One would have been motivated to make this modification due to the fact that Oishi teaches that the flame resistance of a polyester such as PET can be increased through the incorporation of 5-40% by weight of a flame retardant such as DMMP. In light of the fact that all of the layers in Murschall et al. are made of PET and are formed at high temperature, there is motivation to add the flame retardant of Oishi et al. to any of the layers specified by Murschall et al.

29. Regarding the limitations of claim 10, wherein the applicant requires 0.5-30% by weight of flame retardant to be present in the outer layer. This limitation is met as set forth above for claim 8, as Oishi et al. clearly teaches that 5-40% of DMMP is suitable added to PET to increase flame resistance. As 5% is completely encompassed within the range specified by the applicant in claim 9, this limitation is met.

30. Regarding the limitations of claims 11 and 12, wherein the applicant requires 0.1-1.0% of hydrolysis stabilizer to be present in the out layer. It would have been obvious

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to one of ordinary skill in the art at the time the invention was made to utilize 0.1-5% of carbodiimide as taught by Rogers et al. in the outer layer of the multilayer PET film taught by Murschall et al. as modified by Rogers et al.

31. One would have been motivated to specifically select carbodiimide as the hydrolysis stabilizer as Rogers et al. clearly shows that adding 0.1-5% of carbodiimide to PET improves the durability of the films into which it is incorporated. As 0.1% is encompassed by the range required by claim 12, this limitation is met.

32. Regarding the limitations of claim 13, wherein the applicant requires the film to comprise recycled material. Murschall et al. teaches that the film may contain recycled material (page 5, lines 23-25). Thus, this limitation is met.

33. Regarding the limitations of claims 14-17, wherein the applicant requires the polyester film of claim 1 to exhibit the required optical properties. As claim 1 only requires a 1 layer film, applicant is directed to examples 3 or 4 of Murschall et al. which clearly show that the film meets the required optical properties, wherein the optical properties are measured via the same methods as utilized in the instant application. The yellowness requirement can be found on page 7, line 1. Regarding the embrittlement requirements of claim 1, this limitation is met as set forth above.

Response to Arguments

34. Applicants arguments dated 6/30/03 have been fully considered but are not persuasive in overcoming the prior applied 103 rejections. The applicant asserts that DE19630599 was commonly owned or commonly assigned to the same company/inventors at the time the instant application was filed. As a result, the

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applicants assert that DE19630599 is disqualified from the pool of available prior art under 35 U.S.C 103(c).

35. While the examiner does not dispute that the instant application and the DE19630599 reference were commonly owned and/or assigned at the time the instant application was filed, the examiner respectfully points out to the applicant that 35 U.S.C 103(c) states:

- "Subject matter developed by another person, which qualifies as prior art **only** under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person."

36. In the instant case, DE19630599 was published on February 5th, 1998. The instant applications effective filing date is January 1, 2000. Thus, although the DE19630599 document is applied in a 35 U.S.C 103(a) type rejection, it qualifies as 102(b) type prior art, as it was published more than a year prior to the applicant's effective filing date. The exclusionary proviso of 35 U.S.C 103(c) **only** applies to prior art that is valid **only** under **35 U.S.C 102 (e), 102 (f), or 102 (g)**. As the DE19630599 reference is valid as prior art under 35 U.S.C 102(b), exclusion under 35 U.S.C 103(c) **does not apply**.

37. As the applicants presented no other arguments with respect to the prior applied 35 U.S.C 103(a) rejections, these rejections are hereby maintained.

Conclusion

38. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

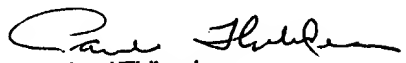
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolas J. Uhler whose telephone number is 703-305-0179. The examiner can normally be reached on Mon-Fri 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0389.

NJU

Nju
July 21, 2003


Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700